REMARKS

I. Status of Claims

Claims 1, 25, 28, 38, 39, and 43-58 are pending and subject to examination in this application. No amendment is made in this paper.

II. Rejections under 35 U.S.C. § 103

A. Sweger in view of Matsumoto and Uchiyama

The Examiner maintains the rejection of claims 1, 25, 28, 38, 39, and 43-58 over U.S. Patent No. 5,482,704 to Sweger et al. ("Sweger") in view of U.S. Patent No. 6,010,689 to Matsumoto et al. ("Matsumoto") and U.S. Patent No. 5,876,705 to Uchiyama et al. ("Uchiyama") under 35 U.S.C. § 103 for the reasons of record. Office Action, pages 2-3. Applicants respectfully traverse the rejection for the reasons of record and additional reasons as set forth below.

The secondary references cited by the Examiner, Matsumoto and Uchiyama, broadly disclose various types of conditioning agents or cleaning surfactants for a hair composition. *See* Matsumot, col. 3, line 37 to col. 6, line 25; and Uchiyama, col. 12, line 10 to col. 20, line 49. Matsumoto or Uchiyama, however, each teaches that those conditioning agents need to be combined with **other** specific ingredients (*i.e.*, a particular type of functional silicones in Matsumoto or fatty compounds and water in Uchiyama) to yield beneficiary results.

For instance, Uchiyama points out that a variety of conditioning actives have been proposed but states that "many of those actives have the disadvantage of leaving the hair feeling soiled or coated, or interfering with the cleaning efficacy of the shampoo, or of yielding a resultant shampoo with poor shelf stability." Uchiyama, col. 1, lines 46-

49. Uchiyama then discloses that it has surprisingly found a stable shampoo composition having good cleansing and conditioning ability without leaving the hair feeling soiled or coated (*see id.* at lines 55-56). The stable shampoo composition disclosed in Uchiyama comprises a mixture of ingredients, namely, a specific percentages of (1) a detersive surfactant selected from the groups consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants, and zwitterionic surfactants; (2) a fatty compound; (3) a hair conditioning agent selected from nonvolatile dispersed silicone conditioning agents, hydrocarbon conditioning agents, water soluble cationic polymeric conditioning agents, and cationic surfactants; and (d) water. *See id.* col. 2, lines 23-44.

Matsumoto, on the other hand, states that "[t]he use of silicones as conditioning agents in hair treatment compositions is well known, . . . [h]owever, a problem associated with such materials is that their use at levels necessary for achieving good tactile and/or visual benefits can make the hair too soft to style or retain a style." Matsumoto, col. 1, lines 9-14. Matsumoto thus teaches to incorporate amidopolyether functional silicones into a hair composition to avoid some of the disadvantages associated with those known conditioning agent. *See id.* at lines 26-35.

Notably, while both Matsumoto and Uchiyama disclose various types of conditioning agents or cleaning surfactants for a hair composition, both Matsumoto and Uchiyama specifically teach that those conditioning agents need to be **combined** with other specific ingredients (i.e. a particular type of functional silicones in Matsumoto or fatty compounds and water in Uchiyama) to yield beneficiary results.

Nevertheless, in response to Applicants' Reply dated April 8, 2009, the Examiner alleges that "sine the cationic compounds herein are known hair conditioning agents, the employment of these agents as conditioning agents in a hair care products would have been obvious." Office Action, pages 6-7. Applicants respectfully disagree for at least the following reasons.

The fact that certain cationic compounds are known hair conditioning agents does not mean that any newly developed formulations comprising those known ingredients would have been obvious to one of ordinary skill in the art. In contrast, when considering Matsumoto or Uchiyama as a whole, one of ordinary skill in the art would have had **NO** reasonable expectation of success that the conditioning agents or cleaning surfactants would provide beneficial results when **isolated** from the required components disclosed in either Uchiyama or Matsumoto. Further, one of ordinary skill in the art would **not** have been able to **predict** with any degree of certainty whether selecting certain conditioning agents disclosed in Uchiyama or Matsumoto and combining those with other ingredients NOT taught in Uchiyama or Matsumoto would lead to a composition with desired properties (*i.e.*, improved disentangling properties).

Applicants respectfully submit that "[t]he mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. M.P.E.P. §2143.01(III) (internal citation omitted). In addition, the Supreme Court mandates that "[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit." *KSR Int'l Co. v. Teleflex Inc., et al.*, 127 S. Ct.

1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."))

In the present case, however, the Examiner fails to provide any reasons why one of ordinary skill in the would be motivated to **combine** the conditioning agents with at least one amphoteric starch as recited in the current claim 1 of the present application. The Examiner also fails to provide any plausible rationale to support the allegation that one of ordinary skill in the art would "have reasonably anticipated the success" of the combination of at least one amphoteric starch and at least one cationic conditioner as recited in claim 1 of the present application. For at least these reasons, no *prima facie* case of obviousness has been established.

In addition, Applicants have showed in the record that the claimed invention would not have been obvious at the time of the invention was made.

For instance, the Declaration under 37 C.F.R. § 1.132 of Veronique MAHE, filed September 13, 2005 ("Mahe 2005 Declaration") shows that the inventive compositions comprising amphoteric starch exhibited improved cosmetic properties as compared to a composition that incorporated a nonionic starch. Mahe 2005 Declaration, ¶ 6. One of ordinary skill in the art would **NOT** be able to predict that the combination of amphoteric starch with specific conditioning agents would lead to improved hair compositions as compared to the combination of nonionic starch with the same conditioning agents. Thus, the claimed invention would not have been obvious in view of the cited art. ("When considering obviousness of a combination of known elements, the operative

question is thus 'whether the improvement is more than the predictable use of prior art elements according to their established functions.'") (citing *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740, 82 U.S.P.Q.2d 1385, 1396 (2007)).

Similarly, the Declaration of Frederic WOODLAND under 37 C.F.R. § 1.132, filed April 8, 2009 ("Woodland Declaration") also establishes **unpredictability**, demonstrating that there is no presumption that all conditioning agents in combination with an amphoteric starch of formula (I) would result in similar properties.

Specifically, the results of the three comparisons in the Woodland Declaration indicate that the inventive compositions (comprising behenyltrimethyl ammonium chloride, polydimethyl/methyl aminoethyl aminopropyl siloxane, or methyl alkyl alkylamidoethyl imidazolinium methylsulfate as the conditioning agent) lead to statistically significantly unexpected and improved suppleness and ease of disentanglement of the hair, in comparison to the comparative composition that contains a conditioning agent disclosed in both Uchiyama and Matsumoto (hydroxypropyl guar trimethyl ammonium chloride (Jaguar C13 S from Rhodia)). *See* Woodland Declaration, ¶ 9.

Nevertheless, questioning the effect of the Woodland Declaration, the Examiner contends that "one of ordinary skill in the art would have selected KDMF (behenyltrimethyl ammonium chloride) over Jaguar C13S for use with CEPA since Jaguar is used as thickening and conditioning agent (see Jaguar C13S), and CEPA is known [a]s thickening agent, one of ordinary skill [in] the art would not be motivated to add another thickener." Office Action, page 6. Applicants respectfully disagree for at least the following reasons.

First, the Jaguar C13S document cited by the Examiner ("Jaguar C13S") teaches that "Jaguar C13S is an ideal polymer for conditioning shampoos, crème rinse conditions, lotions, creams and other personal care products. The cationic charge provides substantively to hair and skin while the polymer imparts **excellent** conditioning properties." The Jaguar C13S document (emphasis added). The Jaguar C13S document, however, does not teach that Jaguar C13S would not be suitable for combining with another ingredient that has certain thickening properties. Rather, in view of the **excellent** conditioning properties associated with Jaguar C13S, one of ordinary skilled in the art would have had more motivation to use it for preparing a conditioning composition. Accordingly, the Examiner's assertion that one of ordinary skill in the art would have selected Genamin KDMF (behenyltrimethyl ammonium chloride) over Jaguar C13S for the use with CEPA is simply unfounded.

Moreover, when asserting that "CEPA is known [a]s thickening agent, one of ordinary skill [in] the art would not motivated to add another thickener," the Examiner has apparently based on an ungrounded assumption that a skilled artisan would have had any reason to choose amphoteric starch, among myriad ingredients found in the prior art, and combine it with a conditioning agent at the first place. Nevertheless, none of the cited references would have motivated one of ordinary skill in the art to do so.

For instance, Matsumoto and Uchiyama merely teach that those conditioning agents need to be **combined** with other specific ingredients (i.e. a particular type of functional silicones in Matsumoto or fatty compounds and water in Uchiyama) to yield beneficiary results. In view of all those beneficial results associated with Matumoto's or Uchiyama's composition, one of ordinary skill in the art would have had no motivation

nor reasonable expectation of success to further modify the teachings of either Matsumoto or Uchiyama.

Sweger, on the other hand, broadly teaches that amino-multicarboxylate starch derivative can "provide thickening and emulsion stabilization and ehxiht good appearance and feel to the **skin**." Seweger, col. 1, lines 33-36 (emphasis added). Sweger, however, does not teach or suggest that amino-multicarboxylate starch derivative would improve the properties of a hair conditioner. In fact, a majority of the Sweger's working examples are directed to skin products and not hair products. *See* Sweger, Examples 2 to 9. Thus, Sweger would not have prompted a skilled artisan to combine amphoteric starch with a conditioning agent.

Even if one skilled in the art have had any reason to use amphoteric starch for preparation of a conditioning composition, *arguendo*, Applicants respectfully submit that nothing in the prior art would have led one skilled in the art to pick and choose components from the prior art with any reasonable expectation that the choices would lead to desirable results. Indeed, the Woodland Declaration shows three examples where the presumption of similar properties is exploded completely, undermining the existence of any *prima facie* case. Hence, no matter what other comparative tests might show, Applicants have established, at a minimum, unpredictability and that there is no basis in fact for assuming that similar properties always exist among the known cationic conditioners.

Based on the forgoing, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection.

B. Janchipraponvej in view of Sweger, Uchiyama, and Martino

The Examiner also maintains the rejection of claims 1, 25, 28, 38, 39, and 43-58 over U.S. Patent No. 4,954,335 to Janchipraponvej ("Janchipraponvej") in view of Sweger, Uchiyama, and U.S. Patent No. 6,210,689 to Martino et al. ("Martino") under 35 U.S.C. § 103 for the reasons of record. Office Action, pages 3-5. Applicants continue to traverse the rejection for the reasons of record and for the additional reasons as set forth below.

In response to Applicants' Response filed April 8, 2009, the Examiner asserts that '[t]he cited references teach that each and every ingredient herein is known for the function herein claimed, e.g. thickener, hair conditioning agent, surfactant, etc. . It is also known that a hair care product contains surfactant(s), thickener, hair conditioning agent. . . . applicant fails to present a prima facie case of unexpected results." *Id.* at pages 7-8. Applicants respectfully disagree for at least the following reasons.

First, the fact that thickeners, hair conditioning agents, and surfactants are known ingredients in the art does not mean that any newly developed formulations comprising those known ingredients would have been obvious to one of the skilled in the art. Applicants once again remind the Examiner that "[t]he mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. M.P.E.P. §2143.01(III) (internal citation omitted). In addition, the Supreme Court mandates that "[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit." *KSR Int'l Co. v. Teleflex Inc., et al.*, 127 S. Ct.

1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.")).

In the present case, the Examiner has failed to demonstrate reasons why one of ordinary skill would modify Janchipraponvej in order to arrive at the claimed invention, *i.e.*, to specifically picked Sweger's multicarboxylate starch derivatives among many other thickeners known in the art and added it into Janchipraponvej's composition as a thickener.

Furthermore, contrary to the Examiner's assertion, Applicants have provided the Examiner with comparative testing results showing that because of unpredictabilities, the claimed invention would not have been obvious at the time of the invention was made. For instance, the Mahe 2005 Declaration shows that the inventive compositions comprising amphoteric starch unexpectedly exhibited improved cosmetic properties as compared to a composition that incorporated a nonionic starch. Mahe 2005 Declaration, ¶ 6. The Woodland Declaration also establishes **unpredictability**, demonstrating that there is no presumption that all conditioning agents in combination with an amphoteric starch of formula (I) would result in similar properties.

Additionally, as described in the as-filed specification, it was after considerable research that Applicants have found that by introducing at least one amphoteric starch into conditioner-based compositions, it is possible to limit, or even eliminate, at least one of the problems generally associated with the use of conditioner-based compositions, *i.e.*, the lankness and the lack of smoothness and suppleness of the hairs.

As-filed specification, page 2, lines 4-11. None of the cited references, however, provides any teaching or suggestion that would have directed a skilled artisan to reach that finding.

Furthermore, as Applicants have repeatedly discussed in detail on the record, Mme. MAHE's November 24, 2003, Rule 1.132 Declaration ("Mahe 2003 Declaration") shows that the alleged combination of Janchipraponvej with Sweger by the Examiner would have destroyed the intended purpose of Janchipraponvej, which is to provide a **clear** composition.

However, regarding the data presented in Mahe 2003 Declaration, the Examiner alleged that "one of ordinary skill in the art would have not expected that CEPA carbomer have identical properties, including solubility. Therefore, the detailed procedure for making CEPA solution would not be the same as those for carbomer." Office Action, page 8. Applicants respectfully disagree.

While Janchipraponvej states that its composition can be thickened, Janchipraponvej is completely silent about using an amphoteric starch as a thickener. *See id.* col. 16, lines 9-20. Thus, if one of ordinary skill in the art would not have expected that CEPA carbomer has the same properties as the other thickeners or it would require different procedures for making CEPA solution, as alleged by the Examiner, then why a skilled artisan would have specifically picked Sweger's multicarboxylate starch derivatives, among many other thickeners known in the art, and added it into Janchipraponvej's composition as a thickener. Even if, solely for the purpose of argument, one of ordinary skill in the art has had a reason to add Sweger's amino-multicarboxylate starch derivatives into Janchipraponvej's hair composition, that

person would not be able to predict whether doing so would or would not destroy Janchipraponvej's intended purpose of having a non-emulsified, **clear** hair-conditioning composition. In fact, as Mahe 2003 Declaration shows, such a combination does destroy Janchipraponvej's intended purpose of having a **clear** hair-conditioning composition. *See* Mahe 2003 Declaration ("[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." M.P.E.P. § 2143.01 V.).

Based on the forgoing, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness. Accordingly, Applicant respectfully requests this rejection be withdrawn.

III. Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: October 9, 2009

By: _____
Ningling Wang
Reg. No. 52,412